

INJECTION WELL PERMIT APPLICATION: to drill, deepen, plug back, or convert an existing well

APPLICATION TO DRILL ☒DEEPEN ☐PLUG BACK ☐CONVERSION ☐NAME OF COMPANY OR OPERATOR Town Oil CompanyDATE 3-2-84Route 4

Address

Paola

City

KS

State

DESCRIPTION OF WELL AND LEASE

Name of lease

Walton

Well number

33-W

Elevation (ground)

1035' TM

WELL LOCATION

(give footage from section lines)

1860

ft. from (N) (S) sec line

2425

ft. from (E) (W) sec line

WELL LOCATION

Section 4Township 46Range 33

COUNTY

CassNearest distance from proposed location to property or lease line 405 feetDistance from proposed location to nearest drilling, completed or applied - for well on the same lease 200 feet

Proposed depth

600'

Rotary or Cable tools

Rotary

Drilling Contractor, name and address

Company Tools

Approx. date work will start

When approved

Number of acres in lease

Approx 85

Number of wells on lease, including this well, completed in or drilling to this reservoir: _____

Number of abandoned wells on lease: _____

If lease purchased with one or more wells drilled, from whom purchased?

Name Harry KnocheAddress Belton, MO

No of Wells: producing _____

injection _____

inactive _____

abandoned _____

Status of Bond

Single Well ☐ Amt. _____Blanket Bond ☒ Amt. 20,000☒ ON FILE☐ ATTACHED

Outline Proposed Stimulation Program

Water injection and secondary recovery

Proposed casing program

amt. 600'size 2"wt/ft 3.75cem. to surface

Approved casing - To be filled in by State Geologist

amt. 600'size 2"wt/ft 3.75cem. to surfaceI, the undersigned, state that I am the Partner of the Town Oil Co.

(company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature Michael J. TownPermit Number #20437Approved Date 4/25/84Approved by Wallace B. Hume RD

Note: This Permit not transferable to any other person or to any other location

☐ SAMPLES REQUIRED☒ SAMPLES NOT REQUIREDWATER SAMPLES REQUIRED ☒APR 09 1984

MO. OIL & GAS COUNCIL

Remit two copies to: Missouri Oil and Gas Council
P.O. Box 250, Rolla, MO 65401
One will be returned for driller's signature

Approval of this permit by the Oil and Gas Council does not constitute endorsement of the geologic merits of the proposed well nor endorsement of the qualifications of the permittee.

3/12/82

I Lester Town of the Town Oil Co.
Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized Council representative.

Driller's signature Michael Town

Date 3-2-84

Proposed Operations Data

Proposed average daily injection, pressure 400 psig, rate 25 bpd/gpm, volume 300 bbl/gal
Approved average daily injection, (to be filled in by State Geologist). pressure 400 psig, rate 25 bpd/gpm, volume 30 bbl/gal
Proposed maximum daily injection, pressure 700 psig, rate 50 bpd/gpm, volume 1000 bbl/gal
Approved maximum daily injection, (to be filled in by State Geologist). pressure 600 psig, rate 50 bpd/gpm, volume 1000 bbl/gal

Estimated fracture pressure/gradient of injection zone breakdown 800 psi/foot

Describe the source of the injection fluid produced and fresh water

Submit an appropriate analysis of the injection fluid. (Submit on separate sheet).

See enclosed water analysis report

Describe the compatibility of the proposed injected fluid with that of the receiving formations, including total dissolved solids comparisons.

Same

Give an accurate description of the injection zone including lithologic descriptions, geologic name, thickness, depth, porosity, and permeability.

See the enclosed driller's log, gamma ray and core analysis

Give an accurate description of the confining zones including lithologic description, geologic name, thickness, depth, porosity, and permeability.

See the enclosed driller's log, gamma ray and core analysis

Submit all available logging and testing data on the well.

Give a detailed description of any well needing corrective action which penetrates the injection zone in the area of review (1/2 mile radius around well). Include the reason for and proposed corrective action.

None

RECEIVED

APR 09 1984

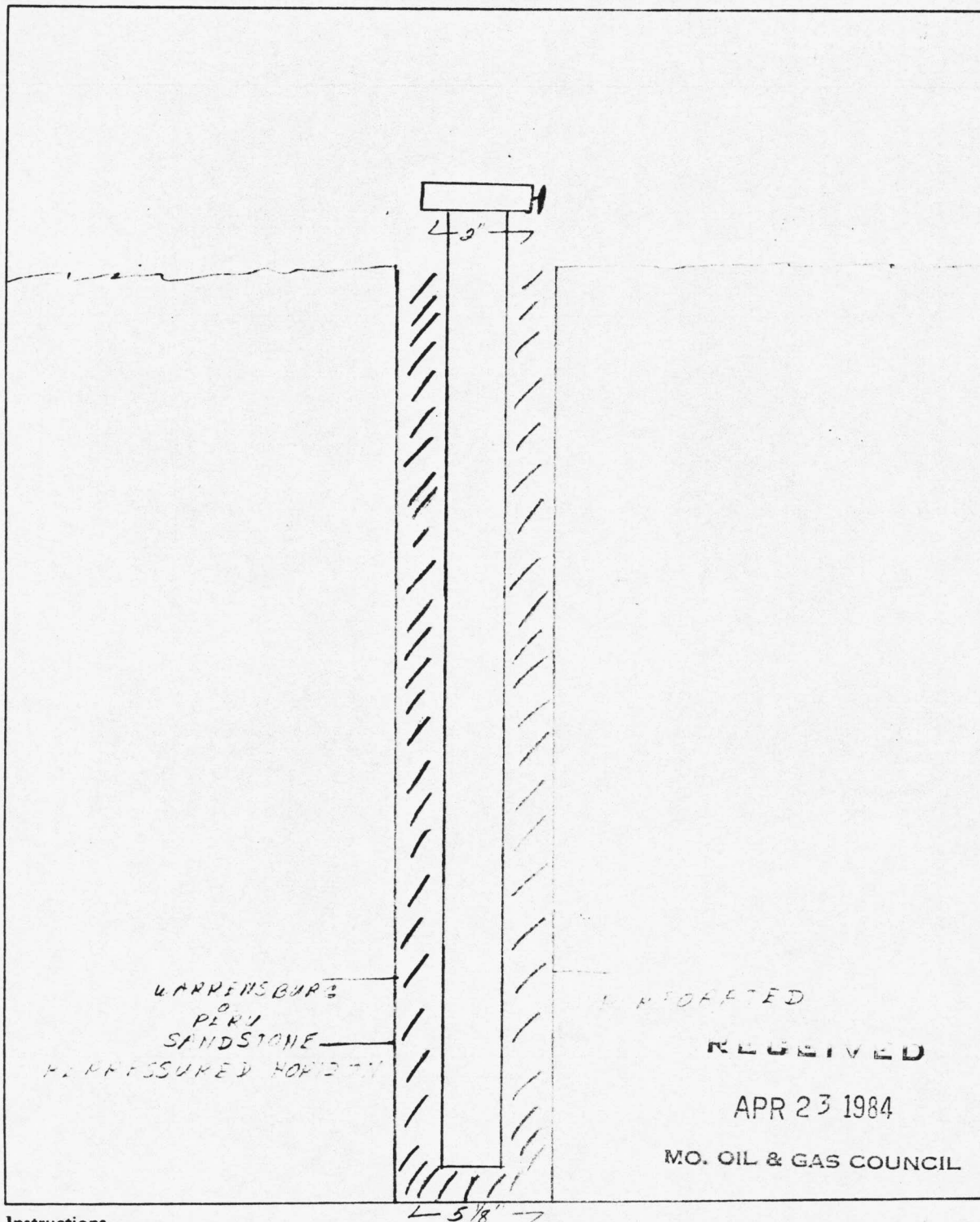
MO. OIL & GAS COUNCIL

#20437

County Jackson Permit # _____ Operator Town Oil Well # _____

Missouri Oil and Gas Council
INJECTION WELL SCHEMATIC

Form OGC-11



Instructions

On the above space draw a neat accurate schematic diagram of the applicant injection well including the following: configuration of well head, total depth or plug back total depth, depth of all injection or disposal intervals, and their formation names, lithology of all formations penetrated, depths of the tops and bottoms of all casing and tubing, size and grade of all casing and tubing, and the type and depth of packer, depth, location, and type of all cement, depth of all perforations and squeeze jobs, and geologic name and depth to bottom of all underground sources of drinking water which may be affected by the injection. Use back if additional space is needed, or attach sheet.

20437

3/12/82

Area of Review Wells (1/2 mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Beary	54A	165' from (N)(S) sec. line 1652.25h (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface 9" hole 7" casing 20.583' Production 6 1/4" hole 4" casing 629.80'
Beary	54C	546.4' from (N)(S) sec. line 1652.2' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	12/80	12/80	Surface 9" hole 7" casing 21.583' Production 6 1/4" hole 4" casing 630.6'
Beary	54C1	546.6' from (N)(S) sec. line 16 J. 2' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	520	0	1/81	1/81	Surface: 9" hole 7" casing 21.67' Production 6 1/4" hole 4" casing 462.50'
Beary	54E	930.2' from (N)(S) sec. line 1652.2' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface 9" hole 7" casing 20.75' Production: 6 1/4" hole 4" casing 628.35'
Beary	B-55	355' from (N)(S) sec. line 1542' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface 9" hole 7" casing 21.42' Production 6 1/4" hole 4" casing 628.70'
		from (N)(S) sec. line from (E)(W) sec. line Sec. T. N. R.						
		from (N)(S) sec. line from (E)(W) sec. line Sec. T. N. R.						
		from (N)(S) sec. line from (E)(W) sec. line Sec. T. N. R.						

Attach additional sheets if necessary

Instructions

In the above grid place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other = specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion information, detailing the cement, casing, and subsurface casing information.

#20437

Area of Review Wells (1/2 mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Deposits	Date Completed	Construction
Walton	T-1 (1-W)	900' from (N)(S) sec. line 2480' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011 / #20024	600'	I	Unknown	12/78	Surface: 8" hole 6 1/4" casing 500' Producing: 6 1/4" hole 4" casing 600' 20 sks cement
Beary	D-59	741.5' from (N)(S) sec. line 1064' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy #20224	640'	I	11/81	11/81	Surface: 9" hole 6" casing 20' Production: 6 1/4" hole 4" casing 635' 83 sks
Beary	B-3	356' from (N)(S) sec. line 1012' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy #20223	640'	I	11/81	11/81	Surface: 9" hole 6" casing 17.5' Production: 5 1/4" hole 2" casing 637' 83 sks
Beary	53 FW	1077' from (N)(S) sec. line 1760' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy #20269	960'	D	1/81	3/81	Surface: 9" hole 7" casing 20' Production: 6 1/4" hole 4" casing 958.5' 150 sks
Walton	2W	330' from (N)(S) sec. line 2635' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011 #20096	620'	I	12/80	12/80	Surface: 8 5/8" hole 6 1/4" casing 22' Production: 5 1/4" hole 2" casing 520" 87 sks
Walton	3W	330' from (N)(S) sec. line 2305' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011 #20097	620'	I	12/80	12/80	Surface: 8 5/8" hole 6 1/4" casing 21' Producing: 5 1/4" hole 2" casing 539' 87 sks
McLaughlin	SWD1	2002' from (N)(S) sec. line 1562' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Prairie Energy #20367	904'	D	7/82	7/82	Surface: Casing: 6 3/4" hole 4 1/2" casing 900' Sks 139
		_____ from (N)(S) sec. line _____ from (E)(W) sec. line Sec. _____ T. _____ N. R. _____						

Attach additional sheets if necessary

Instructions

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#20437

Area of Review Wells (1/2 mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Perforations	Completed Date	Construction
Walton	5W	<u>1201'</u> from (N)(S) sec. line <u>2200'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	600	0	2/82	2/82	Surface: 9" hole 6 1/4" casing 20.9' Production: 5 1/8" hole 2" casing 592'
Walton	6W	<u>1555'</u> from (N)(S) sec. line <u>2330'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	593	0	9/77	9/77	Surface: 6 1/4" casing 20' Production: 2" casing 573'
Walton	8W	<u>1580'</u> from (N)(S) sec. line <u>1595'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	614	0	9/77	9/77	Surface: 6 1/4" casing 18' Production: 2" casing 612'
Walton	20	<u>2229'</u> from (N)(S) sec. line <u>2383'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	550	0	2/76	2/76	Surface: 8" hole 8" casing 20' Intermediate 8" hole 6 1/4" casing 456' Producing: 6 1/4" hole 4 1/2" casing 535'
Walton	22	<u>1413'</u> from (N)(S) sec. line <u>1775'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	594	0	8/76	8/76	Surface 8" hole 8" casing 23' Production: 6 1/2" hole 4 1/2" casing 570'
Walton	24	<u>164'</u> from (N)(S) sec. line <u>2505'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	620	0	1/81	1/81	Surface: 8 5/8" hole 6 1/4" casing 21' Production: 5 1/4" hole 2" casing 620'
Walton	25	<u>165'</u> from (N)(S) sec. line <u>2835'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	620	0	11/80	11/80	Surface 8 5/8" hole 6 1/4" casing 21' Production: 5 1/4" 2" casing 610'
Walton	26	<u>165'</u> from (N)(S) sec. line <u>2140'</u> from (E)(W) sec. line Sec. <u>4</u> T. <u>46</u> N. R. <u>33W</u>	Town 011	620	0	10/80	10/80	Surface: 8 5/8" hole 6 1/4" casing 22' Production: 5 1/4" hole 2" casing 600'

Attach additional sheets if necessary

Instructions

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#20487

Area of Review Wells (1/2 mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Reported as	Date Completed	Construction
Walton	29	495' from (N) (S) sec. line 2140' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011	608	0	9/77	10/77	Surface: 7" casing 74' Production: 4" casing 596'
Walton	31	1261' from (N) (S) sec. line 1517' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011	590	0	1/81	2/81	Surface: 8 5/8" hole 6 3/4" casing 21' Production: 5 1/4" hole 2" casing 502'
Walton	32	1258' from (N) (S) sec. line 1847' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011	600	0	2/82	2/82	Surface: 9" hole 6 3/4" casing 20' Production: 5 1/8" hole 2" casing 588.05'
Walton	37	2221' from (N) (S) sec. line 1518' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Town 011	595	0	3/82	3/82	Surface: 9" hole 6 3/4" casing 20.5' Production: 5 1/8" hole 6 3/4" casing 595.20'
Asjes	C-4	547' from (N) (S) sec. line 882' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	639	0	11/81	11/81	Surface: 9" hole 6 3/4" casing 20' Production: 5 1/4" hole 2" casing 640'
Asjes	C-6	547' from (N) (S) sec. line 559' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	634	0	7/81	7/81	Surface: 9" hole 6 3/4" casing 20' Production: 5 1/4" hole 2" casing 636.5'
Asjes	C-8	547' from (N) (S) sec. line 18' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	670	0	7/81	7/81	Surface: 9" hole 6 3/4" casing 22' Production: 5 1/4" hole 2" casing 660'
Asjes	C-10	54' from (N) (S) sec. line 159' from (E) (W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	636	0	9/81	9/81	Surface: 9" hole 6 3/4" casing 20' Production: 5 1/4" hole 2" casing 636.5'

Attach additional sheets if necessary

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#20437

#20437

Area of Review Wells (1/2 mile radius around well) that Penetrate the Injection Interval

Lease	Well #	Location	Owner	Depth	Type	Date Spudded	Date Completed	Construction
Asjes	E-4	812' from (N)(S) sec. line 882' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33N	Emery Energy	629	0	11/81	11/81	Surface: 9" hole 6 1/4" casing 20' Production: 5 1/4" hole 2" casing 640'
Asjes	G-2	1306.5' from (N)(S) sec. line 1187.5' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	669.4	0	11/81	11/81	Surface: 9" hole 6 1/4" casing 20' Production: 5 1/4" hole 2" casing 670'
Asjes	G-4	1303' from (N)(S) sec. line 972' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	666.0	0	11/81	11/81	Surface: 9" hole 6 1/4" casing 17.6' Production: 5 1/4" hole 2" casing 670'
Beary	A-52	165' from (N)(S) sec. line 1872' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	642	0	1/81	1/81	Surface: 9" hole 7" casing 21' Production: 6 1/4" hole 4" casing 628.4'
Beary	52C	546.46' from (N)(S) sec. line 1872.25' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface: 9" hole 7" casing 35' Production: 6 1/4" hole 4" casing 627.80'
Beary	E-52	927.92' from (N)(S) sec. line 1872.25' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	641	0	1/81	1/81	Surface: 9" hole 7" casing 21.853' Production: 6 1/4" hole 4" casing 628.35'
Beary	53B	355.78' from (N)(S) sec. line 1762.25' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface: 9" hole 7" casing 21.583' Production: 6 1/4" hole 4" casing 630.85'
Beary		738.19' from (N)(S) sec. line 1762.25' from (E)(W) sec. line Sec. 4 T. 46 N. R. 33W	Emery Energy	640	0	1/81	1/81	Surface: 9" hole 7" casing 20.9' Production: 6 1/4" hole 4" casing 627.5'

Attach additional sheets if necessary

Instructions

In the above grid place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion information, detailing the cement, casing, and subsurface casing information.

Walter Lowe

PUBLIC NOTICE

Town Oil Company, Rt. 4, Paola, Kansas has applied for injection wells to be drilled to an approximate depth of 600 feet at the following locations:

No.	Distance from North Line of Section	Distance from East or West Line of Section
4W	965'	2514' E
7W	1607'	2050' E
9W	2025'	2341' E
10W	2080'	2667' E
11W	1100'	1682' E
12W	1740'	1683' E
13W	2060'	1683' E
14W	2413'	1683' E
15W	2417'	1358' E
16W	2067'	1358' E
17W	1747'	1358' E
18W	1427'	1357' E
19W	1102'	1357' E
20W	847'	2044' E
21W	330'	2043' E
22W	648'	2362' E
23W	648'	2679' E
24W	1121'	2404' W
25W	1275'	2696' E
26W	1545'	2180' W
27W	1860'	2685' W
28W	2399'	2538' W
29W	2400'	2507' E
30W	2406'	2167' E
31W	2395'	2185' W
32W	2105'	2250' W
33W	1860'	2425' W
34W	648'	2409' W
35W	330'	2413' W
36W	30'	2416' W
37W	30'	2679' E
38W	30'	2360' E
39W	30'	2042' E

of Section 4, Township 46, Range 33, in Cass County, Missouri.

Written comments or request for additional information regarding such wells should be directed within fifteen (15) days of this notice to:

State Geologist
Missouri Oil and Gas Council
P.O. Box 250
Rolla, Missouri 65401

36-1c

AFFIDAVIT OF PUBLICATION

RI SS.

ing duly sworn according to law, says that he is the ton-Raymore Star-Herald, a weekly newspaper of printed and published continuously for a period ears in the County of Cass, State aforesaid; and r has complied with the provisions of the Laws Page 431; and that the notice hereto annexed was er for weeks consecutively, as follows:

92 No. 36 dated 12/16/84

..... No. dated, 19.....

..... No. dated, 19.....

..... No. dated, 19.....

..... No. dated, 19.....

..... No. dated, 19.....

200

Joseph M. Bure
Publisher
n to before me this 22nd day of Jan

icial seal.

Notary Public

RECEIVED

FEB 03 1984

MO. OIL & GAS COUNCIL



REPORT OF WATER ANALYSIS

Company Town Oil Company

Date 5-4-81

Analysis No.

Sampling Date 5-3-81

Date Sample Rec'd.

Sample Marked Walton

DISSOLVED SOLIDS

Cations	mg/l	meq/l
Sodium, Na (Calc.)	6,969	303
Calcium, Ca	560	28
Magnesium, Mg	194	16
Barium, Ba	5	0

RESULTS AS COMPOUNDS

	mg/l
as NaCl	
as CaCO ₃	1,400
as CaCO ₃	800
as BaSO ₄	9

Cations Total 7,728 347

Anions

Chloride, Cl	11,897	336
Sulfate, SO ₄	0	0
Carbonate, CO ₃	0	0
Bicarbonate, HCO ₃	688	11

as NaCl	19,600
as Na ₂ SO ₄	0
as CaCO ₃	0
as CaCO ₃	564

Anions Total 12,585 347

Total Dissolved Solids (Calc.) 20,313
Total Iron, Fe .15
Acidity to Phenolphthalein, CO₂ 95

as Fe .15
as CaCO₃ 216

OTHER PROPERTIES

pH 7.9
Specific Gravity 1.003
Turbidity (JTU)

CaCO₃ STABILITY INDEX

@ 70° F.
@ 120° F.
@ 160° F.
Method of Stiff & Davis

Remarks:

**NALCO CHEMICAL COMPANY
VISCO CHEMICALS**

P O BOX 87 • SUGAR LAND, TEXAS 77478